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ABSTRACT

A report of the World Health Organization (WHO) Working Group on the Training of Senior Public Health Administrators is presented. The working group met to review programs for specialized, advanced, and continuing training of senior public health administrators. WHO activities leading up to the working group and WHO's present policy and activities in the field of health services and manpower development are reviewed. The following areas are addressed: main categories and tasks of senior public health administrators, participation of public health officers in high level decision-making processes, and factors determining the managerial policy of senior public health administrators. Aims and objectives of training programs and courses for top-level management personnel, and the flexibility of curricula in response to new types of health services for meeting health needs are covered. Additional topics include international training of public health medical officers, including inservice training possibilities, and problems of international collaboration in this training; and the responsibility of public health administrators for future strategy and tactics in health administrations. A study on training patterns for public health medical officers in 12 western and eastern European countries is appended. (SW)

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Training of Senior Public Health Administrators

Report on a WHO Working Group

Moscow
21–23 June 1978

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WORKING GROUP ON THE TRAINING OF SENIOR PUBLIC HEALTH ADMINISTRATORS

Moscow, 21 – 23 June 1978

1. INTRODUCTION

The Working Group on the Training of Senior Public Health Administrators met in the Central Institute for Advanced Medical Studies, Moscow, from 21 to 23 June 1978 to review programmes for specialized, advanced and continuing training of senior public health administrators.

The Group comprised 12 WHO temporary advisers with extensive experience of training in public health administration and 4 WHO staff members, 3 from the Regional Office for Europe and 1 from headquarters. The Working Group elected Professor Y.N. Kasatkin as Chairman and Dr V. Rojo-Fernandez as Vice-Chairman, with Dr J.M. Weddell as Rapporteur.

Dr R. Nazarov, Deputy Director, Board for Educational Institutions, welcomed the participants to the meeting. On behalf of Dr Leo A. Kaprio, Director of the WHO Regional Office for Europe, Dr D.K. Sokolov, Chief, Strengthening of Health Services, opened the meeting and welcomed the participants; he thanked the Ministry of Health of the USSR for having agreed to host the meeting. He stressed the importance of the training of senior public health administrators, and outlined the work carried out by WHO in this field. In particular, he mentioned the *Educational handbook for health personnel*[a] and the report of the WHO Expert Committee on postgraduate education and training in public health.[b] There is a need for continuing discussion of programmes for specialized, advanced and continuous training of senior public health administrators: how best to use manpower and resources; which ways should be used to promote communications between public health, education and training systems; and what topics and methods are best suited to prepare personnel to fulfil more efficiently their functions as health managers.

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[a] **Guilbert, J.J.** *Educational handbook for health personnel.* Geneva, 1976 (WHO document HMD/76.1).

[b] WHO Technical Report Series, No. 533, 1973 (*Postgraduate education and training in public health: report on a WHO Expert Committee*).

The three main themes for discussion outlined in the agenda were accepted by the Working Group:

(1) the functions and tasks of senior public health administrators;

(2) education and training patterns;

(3) new trends.

In connexion with the first main theme, the need to forecast the consequences of decisions was stressed; to this end more use should be made of modelling.

Professor Marija Kovrigina, Rector of the Central Institute for Advanced Medical Studies, welcomed the Working Group to the Central Institute, which had recently moved into the magnificent new buildings in which the meetings were held.

Annex I of this report contains a study on training patterns for public health medical officers, prepared on the recommendation of the Working Group on the Education and Training of Public Health Medical Officers which had met in Copenhagen in 1976.[a] The list of participants is given in Annex II.

2. WHO ACTIVITIES LEADING UP TO THE WORKING GROUP

The present Working Group was convened as a follow-up to the Working Group on Specific Problems of Schools of Public Health, held in Brussels in 1975,[b] and the Working Group on the Education and Training of Public Health Medical Officers, convened in Copenhagen in 1976.[a] In its report, the 1975 Working Group formulated four main conclusions concerning the problems of health services and their manpower needs.

(1) *General and personal health services*. The changing demographic and epidemiological patterns, complex ecological problems and the increasing burden of chronic degenerative disease present challenging problems for health service administrators. These problems are associated with increasing

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[a] *The education and training of public health medical officers: report on a Working Group*. Copenhagen, WHO Regional Office for Europe, 1977 (ICP/HMD 037).

[b] *Training manpower for health administrations: report on the Working Group on Specific Problems of Schools of Public Health*. Copenhagen, WHO Regional Office for Europe, 1975 (ICP/HMD 020).

public expectations, and an ever greater share of available resources of capital and manpower is being absorbed by technologically more sophisticated health care services. Maldistribution of limited resources is now politically and morally indefensible. The correction of inadequacies and inequalities requires that health care be rationally planned as an entity in which paymaster, educator, administrator, practitioner and patient work together. This requires not only integrated health care systems but also a revolution in the attitudes of everyone concerned. This has profound implications for educational institutions for health personnel. Environmental hazards to health continue to be of major public health concern. If health administrations are to play a significant role in evaluating and controlling these hazards, then a variety of staff with new responsibilities and tasks will need to be trained. Existing educational facilities cannot meet these demands. Training programmes to provide the staff required will need to be designed.

(2) *Interaction of educational systems and health administrations*. A permanent dialogue is required to define educational objectives in relation to manpower needs of the service and to research priorities, to design valid programmes and to evaluate the product against the declared objectives. To this end academic and service staff need to be more closely associated.

(3) *New educational needs of health services*. Health services need staff who can apply the quantitative and social sciences and management theory to the administration and operation of health services. It is also recognized that health administrators need to be trained to communicate effectively with the public and politicians, who ultimately decide policies and control resources. Clinical, medical and other health professional staff, and professional workers in disciplines related to health, also require to have some knowledge and understanding of the fields of study now encompassed by public health.

(4) *Responses of educational systems*. Educational institutions have begun to meet the new needs of health services by extended programmes of higher specialist and continuing education and refresher courses. New models of multidisciplinary education are being developed to meet the trends towards team work and consensus management. Institutions outside the public health field have begun to meet the needs of health professionals for a better understanding of human ecology and the socioeconomic factors which affect health. Programmes which combine in-service training and academic teaching are being developed.

The working group that met in Copenhagen in 1976[a] emphasized the need for continuing postgraduate education, and the advantages of modular

[a] *The education and training of public health medical officers: report on a Working Group*. Copenhagen, WHO Regional Office for Europe, 1977 (ICP/HMD 037).

training to provide a flexible programme that can be adjusted to meet the changing needs of the trainees. The need for educational policy to be determined jointly by academic and service staff was also stressed.

The scope and purpose of the present Working Group was to review programmes for specialized, advanced and continuing training of senior public health administrators. A major need is to train administrators able to advise on priorities in the allocation of resources. Discussion was invited on ways of promoting communication between the public health services and education and training systems in order to prepare personnel more effectively for their function in the health services.

The participants were asked to identify the major educational needs in training administrators, whether medical or nonmedical, and in helping them to evaluate the technical information and decisions which provide the basis for political decisions. The participants were also asked to consider different approaches relevant to the aims of training senior public health administrators.

3. REVIEW OF WHO'S PRESENT POLICY AND ACTIVITIES IN THE FIELD OF HEALTH SERVICES AND MANPOWER DEVELOPMENT

The WHO Medium-Term Programme for Health Manpower Development (1978–1983),[a] was reviewed. The representative from headquarters outlined national activities in health services and manpower development and some of their interrelationships. At present there is often a lack of integration between the different elements of the process – planning, production (i.e., the development of conditions needed for the provision of human resources for health services) and management. Health manpower plans – if there are any – are not taken into account either quantitatively or qualitatively by the training institutions, which often do not even come under the same supervisory authority as the planning unit. There is often no monitoring of health workers' activities and no feedback to adjust the planning and training processes on the basis of that monitoring. Finally, there is a lack of coordination between the health manpower development process and other interested development sectors and agencies, primarily in general education but also in social security, labour, agriculture and other areas. It seems evident that the health manpower development policy of all Member States should concentrate all national efforts in order to *satisfy the health needs of*

[a] **World Health Organization.** *Medium-term programme for health manpower development.* Report by the Director-General to the Thirty-first World Health Assembly, 1978 (document A31/18).

the entire population through health services composed of balanced teams of health personnel. All health activities should be undertaken at the most peripheral level of the health services as practicable, by workers suitably trained to carry out these activities. WHO is helping to achieve this task through long-term plans in health manpower development, to be translated into practical terms through the medium-term programme.

The medium-term programme is a single coherent programme consisting of national, regional and global components. In order to achieve agreed common targets the contributions of the different sections of the Organization are set out clearly in this programme, which reflects the principles, aims, objectives and priorities stipulated by the Twenty-ninth World Health Assembly.

The two main objectives of the medium-term programme are:

(1) to promote the development of appropriate health personnel to meet the health service requirements of entire populations;

(2) to promote the development and application of relevant processes for basic and continuing education.

For the first time a serious attempt has been made to define targets which express what Member States intend to achieve by 1984 in cooperation with WHO. These targets are quantified at country and regional level and include a built-in evaluation element in the form of parameters against which accomplishments can be assessed. The five main targets are:

A.1 Effective coordination between educational and service institutions engaged in health activities, as measured by *evidence* of a greater number of programmes based on common policies, resources and goals.

A.2 Development of health manpower planning capability as *evidenced* by an increased number of countries developing soundly based national health planning, including the prediction of manpower requirements.

A.3 Development of management training capability as *evidenced* by the increase and improvement of existing programmes in the area, leading to an increase in the number of competent health service managers, and their utilization.

A.4 Establishment of career development and continuing education as *evidenced* by clearly defined career structures for health personnel linked to comprehensive national programmes of in-service education.

A.5 Discouragement of undesirable migration of health personnel as *evidenced* by the location and retention of them in the countries, and places within the countries, where they are most needed.

In the discussion that followed it was asked whether any estimate had been made of the health service workers needed and whether WHO intended to carry out research into training and compare different methods. The Group was informed that the proportion of the population that might be engaged in health services could not yet be determined, though WHO was promoting a systematic approach to planning manpower. It was necessary first to identify problems, determine priorities and define objectives. Tasks could then be set and assigned to appropriate persons and training programmes be designed on the basis of the job descriptions to be worked out. At present the emphasis is on the provision of primary health care.

In view of the difficulty of training management personnel, provision for research into training and comparison of different methods is included in the medium-term programme, but WHO is reluctant to recommend any one plan. Each country should draw on the experience of others and work out a programme suited to its own needs.

4. FUNCTIONS AND TASKS OF SENIOR PUBLIC HEALTH ADMINISTRATORS

4.1 Main categories and responsibilities of senior public health administrators

This topic was introduced by Professor G.S. Massé in a review of reasons for the increasing complexity of public health administration. First, its scope has been enlarged and now includes prevention of chronic disease, concern with dental health and the prevention of accidents. Secondly, public health now operates at national and international levels, rather than in geographically restricted communities. Thirdly, there has been a considerable development of medical techniques and equipment, as well as increased sophistication in strategies used in planning and delivering health services.

A great diversity of skills is needed in public health administration. These include skills in environmental, drug and food control, preventive medicine, the delivery of health care to people of all ages in any setting – at home, at work, in schools and hospitals. All these requirements mean that in the public health field the specialists in planning and management have to work together with sanitary engineers, public health nurses, pharmacists, veterinarians, food control laboratories, senior social workers, hospital and home managers, economists, statisticians and specialists in operational research and computers.

Public health administrators work at national, regional and local levels. At national levels the main concerns are the determination of main priorities, long-term planning, resource allocations from the state to the regions, and

educational plans for health personnel. At regional level the main concern is medium-term planning, and the management and coordination of establishments and programmes inside the region. At local level the main tasks are the management and coordination of services, together with some short-term planning. So, going from national to local level the emphasis shifts from planning to management.

The review identified the kind of administrator needed at each level and also outlined the scope of his responsibilities. At planning levels the administrators need to be more scientifically orientated, equipped to work with economists, epidemiologists, specialists in quantitative methods and management sciences. At management level they are responsible for services, and also for supplying information to the planners.

Their postgraduate education needs to be continuous and all types of health service administrators must learn to work effectively with each other.

To meet these different requirements, most of the heads of department in the French Ministry of Health and Family Welfare have been trained at the National School of Administration and have received training in modern administrative techniques. Before entering the School, they must have undergone advanced training in law, economics or political sciences. The curriculum of studies at the School includes administration techniques, quantitative methods and economics, and training takes place at workshops or seminars. Much time is devoted to field work in private enterprises or in public administration, mostly at local level.

At the Ministry of Health and Family Welfare, these heads of department collaborate with high-level specialists in public health sciences, who serve as their technical counsellors and have received postgraduate training at the National School of Public Health, at the universities, or at other specialized postgraduate schools, such as the school attached to the National Institute of Statistics and Economic Studies.

To promote coordination between senior health administrators of different types, their postgraduate training is concentrated in the National School of Public Health, where specialist training is provided for public health physicians, public health senior nurses and other health personnel, sanitary engineers, public health pharmacists and statisticians, health educators, different types of administrator within the health sector, teachers of sensory-handicapped children, and managers of family-planning programmes.

In addition to the specialist training, all the trainees get a basic knowledge of the different aspects of public health, in quantitative methods and in administrative and management sciences. The teaching is done mostly in small groups and much time is devoted to field work.

Another important activity of the School is the continuous education of the senior health administrators.

Following this review the Group entered into a detailed discussion on the place of the medical and nonmedical administrator, provoked by

a question raised by one participant, as to which background the senior public health administrator should have – medical or nonmedical?

On the one hand, it was pointed out that at present in most European countries the majority of health service administrators are nonmedical and that doctors are not better prepared for administration than lawyers and economists; in the future a specialist in public health administration might have a university training in one health field, followed by first-class postgraduate training in public health administration.

On the other hand, it was felt that at the senior level it was essential for the administrator to be medically qualified in order to make an effective contribution to planning. The Group was reminded of the implications of any decision that senior health service administrators should be medically qualified. Few doctors remain for any length of time in senior health service administration and so it is difficult to train a sufficient number to fill the posts. At present there is a small stable core, the rest change frequently. Emphasis was placed on the importance of the multidisciplinary team in health services planning which must be well advised from medicine and nursing; it was also stressed that the coordinator of a health team must be a doctor with a clinical background, but trained in the basic subjects of health planning as well.

One participant pointed out that the problem has its roots in the medical schools, and that much more needs to be done to teach medical students about health service administration. Finally the need for continuous postgraduate education was stressed.

4.2 Participation of public health officers in high level decision-making processes

To promote the discussion on this subject, a review of the situation in the United Kingdom, prepared by Sir John Brotherston, was presented to the Group.

In the United Kingdom, the meaning of the term "community medicine" has developed since 1974 and is now wider than the term "public health". It is defined as being concerned with the study of health and disease in populations. The functions of the specialist in community medicine are: to investigate and assess the needs of the population so that priorities may be established for the promotion of health, the prevention of disease and the provision of medical care; and to coordinate medical expertise so that policies which are in accord with medical need can be presented to the central department, area health authorities, and those responsible for the management of services below area level. The specialty has a major contribution to make to the successful integration of medical work.

There is a great need to learn about the best methods to exploit the potential of community medicine in alliance with clinical medicine to define need, target effort and evaluate work done. Core knowledge required for the

practice of community medicine includes epidemiology, statistics, the relevant social sciences, including health economics and the principles of administration and management.

The report of the Working Party on Medical Administrators (Hunter Report 1972)[a] defined the functions of medical administrators at three different levels.

(1) Function at regional level: the Chief Administrative Medical Officer will be a member of the group of administrative and professional chief officers bearing the main responsibility for advising the regional authority on the overall development of services, including capital programmes. He, or a member of his staff, will be involved in consultations with the central department about the setting of national objectives, and will also take part in defining objectives at regional level. He will be concerned at both levels in the translation of objectives into workable policies for their achievement, bearing in mind the availability of resources, and for this purpose will have executive responsibilities delegated to him by the regional authority.

(2) The functions of the community medicine specialist operating within an area or part of an area are: provision of health information; planning; management; advice and assistance to local authority department, voluntary and other bodies on the planning and management of their services; provision of medical services required by local government authorities with responsibilities for environmental hygiene and communicable disease control.

(3) The functions of a district community physician can be summarized as follows: maintenance of a health profile of the district through collection and analysis of information; participation in preparation of area plans and policy and in their implementation within the district; additional functions relating to services organized or administered on an area rather than a district basis, or relating to local government services.

The coverage of tasks for community medicine can best be seen from the job description of the Chief Administrative Medical Officer of an area in Scotland, where the area is the only tier of the integrated health service. He will be the chief medical adviser to the Board of Health and the general coordinator of health care planning and will head the team of specialists in community medicine.

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[a] **Department of Health and Social Security**. *Report of the Working Party on Medical Administrators*. London, Her Majesty's Stationery Office, 1972.

In particular he will:

(1) identify the health care needs of the population;

(2) measure the extent to which these are being met;

(3) coordinate the development of health care objectives and plans to meet them;

(4) coordinate the preventive health services and the promotion of health education;

(5) develop working relationships between the Board of Health and the medical advisory structure;

(6) ensure the discharge of statutory obligations;

(7) provide medical advice and liaise with the local authorities responsible for education, social work, communicable disease control and environmental control;

(8) cooperate with the bodies responsible for postgraduate medical education; and

(9) where relevant, develop the Board's responsibilities with universities.

The foundation in 1972 of the Joint Faculty of Community Medicine in the United Kingdom was an event of major importance. The objectives of the Faculty are: to function as a faculty within the Royal Colleges of Physicians in the United Kingdom; to promote the advancement of knowledge in the field of community medicine; to develop community medicine with a view to maintaining the highest possible standards of professional competence and practice and to act as an authoritative body for the purpose of consulting in matters of educational or public interest concerning community medicine.

To achieve these objects the Faculty may exercise powers to organize and promote training and research in community medicine for the public benefit. Their recommendations have now been embodied in regulations for the examinations for membership of the Faculty of Community Medicine.

Subsequent to registration after three years' combined general professional and early specialist training, at least one year of clinical training is required, preferably supplemented with at least one further year of practical clinical experience.

Before starting higher specialist training, the trainee should normally have completed a period of early specialist training in epidemiology, statistics, the relevant aspects of the social sciences and the principles of administration and management, and have passed part I of the examination for membership of the Faculty. Full-time academic courses and part-time courses to supplement in-service training are set up for this purpose, or the physician may study these subjects on his own.

Higher specialist training will usually be undertaken in approved posts and lasts three years. Trainees with three years' general professional training may count part of the time spent on full-time academic courses in community medicine or in in-service training as part of higher specialist training. The trainee should carry out and report on an original project during the first half of the training period, unless this has been completed during the early specialist training. During the training period, the trainee should be given duties with rapidly increasing degrees of responsibility and hold posts of the grade of senior registrar, lecturer or research associate/research fellow. During the training period, the trainee should develop interests and experience within one or more fields of application of community medicine and there will be a need for further educational experience in these specialized fields.

There have been two main approaches to the training of community medicine specialists. The first, and more traditional, is an entirely academic two-year course leading to a diploma or the degree of M.Sc. in Community Medicine. The second approach is currently being developed in England; it is the in-service training scheme for community medicine specialists, which combines acquiring the skills of applied community medicine with learning the principles of the academic subjects that form the basis of these skills.

This review stimulated considerable discussion on the problems of training, and the lack of experienced trainers was highlighted. In connexion with the higher-level decision-making process it was pointed out that good health information on which to base plans is often lacking, and that although there is a need for central planning there is often little or none. The difficulty of defining the information needed for decision-making was commented on, as was the difficulty of detecting those problems that need higher-level decisions. At present health services planning is so ineffective that there is little difference in health output whether or not plans exist. Attention was directed to the need for education and experience in decision-making, and also for a knowledge of the experience available within other health disciplines so that this can be used to the full in decision-making. The gap between theory and practice in in-service training was stressed. Much that is taught can often not be used in practice, as there are too many problems and too few people working in health services administration. The senior administrator must learn to distinguish between the problems that must be tackled, and those that could be delegated or left. It was emphasized that the teaching must have relevance, and that there needs to be feedback from the practitioners on the value of the training they have been given.

4.3 Factors determining the managerial policy of senior public health administrators

In introducing the debate on this subject, Professor M.F. Lechat defined the senior public health administrator as a top-level professional in direct

contact with the often nonmedical decision-maker. The senior public health administrator is the link between the policy-maker and the community, channelling technical knowledge to the policy-maker, and shaping policy decisions which have useful and technically sound objectives for the community. His two main functions are concerned with information and communication. The latter requires a combination of considerable technical expertise and a profound awareness of the needs of the community, backed by a knowledge of opportunities and potentials for change. It also means the ability to explain technical matters clearly to nonexperts on the one hand, and on the other to make professionals sensitive to community concerns or political necessities.

The work of the senior public health administrator has two main components, one being an infinite series of constraints – political, legislative, social and managerial – and the other a set of specific opportunities. This has important implications for training. His key position enables him to know what is going on, to define problems, and to decide what is and is not up for discussion.

A number of reasons why health plans fail, already listed by Professor S. Halter at the European Conference on National Health Planning, arranged in Bucharest by the Regional Office in 1974,[a] were recalled in this context.

- It is often difficult or impossible to gather suitable information; assessment of the situation is biased by pluralism; everybody thinks they know better than the planners; the setting of priorities is biased; some trifling problems are inflated while important ones are bypassed.
- Economic aspects appear as untouchable and make implementation impossible; some social aspects are overemphasized without any real benefit to the individual's wellbeing, e.g., the pressure of trade unions for early retirement or shortening of working hours.
- The public does not accept that a public health authority should decide that a small risk is acceptable, although they themselves take important risks.
- Too many people live from scandal, e.g., mass media, protest organizations; these people do not want to be convinced by any type of argument.
- Legislation is rarely appropriate and is often misused or even used against the lines of the plan.

[a] *European Conference on National Health Planning: report*. Copenhagen, WHO Regional Office for Europe, 1974 (EURO 4107).

– The responsibility for education and training of health personnel usually lies with the ministry of education.

It was emphasized that one of the major obstacles to good health services planning is the paucity of information, so that at times no valid planning can be done until a basic health information system has been organized. Without adequate data it can be difficult to persuade a decision-maker to postpone a decision or not to make it in conditions of uncertainty.

Attention was drawn to the difficulties of translating health indices into budgetary allocations, and also of setting priorities. Although these are usually correlated with need, they are often defined by the professional groups. The senior public health administrator has to ensure that consumer needs are also taken into account when priorities are set.

The training of senior public health administrators was highlighted. Two difficulties exist, one being that the differences between countries are so great that a single programme of training suitable for the needs of different countries would be out of the question; however, the constraints facing senior administrators are basically similar in all countries and so this objection does not seem to be a substantial one. The other objection is that learning to cope with constraints is not the only attribute of good management; two main characteristics of a good senior public health administrator are awareness of problems coupled with capacity to make full use of information, and the ability to speak the decision-maker's language.

It was suggested that training should follow three main lines:

(1) to develop creativity and imagination, though this might be beyond the scope of formal training;

(2) to develop the capacity of the senior administrator to speak the languages of various disciplines; he must be able to explain technical matters in simple and plain terms, which is often difficult; the simpler one wants to be, the more one has to know;

(3) although senior health administrators learn about constraints early in their career, the lower-level administrators as well as the medical profession often do not realize their existence. To improve this situation it is important that senior public health administrators play an active part in undergraduate and postgraduate teaching of doctors and public health specialists.

The Group was reminded that at the Working Group on the Education and Training of Public Health Medical Officers[a] in Copenhagen in 1976,

[a] *The education and training of public health medical officers: report on a Working Group*. Copenhagen, WHO Regional Office for Europe, 1977 (ICP/HMD 037).

Dr Kaprio mentioned the possibility of organizing multidisciplinary inter-departmental informal meetings of senior officials to exchange experience in connexion with common problems, and so improve communications between various disciplines and governmental departments. It was often lack of time rather than lack of training, concern or willingness that made top managers unable to communicate.

WHO already plays a major role in the training of senior health service administrators, through its exchange programmes, seminars and meetings. These have provided opportunities for senior professionals to meet, define the issues, compare their individual experiences and help them to seek their own solutions to the problems.

It was suggested that schools of public health might play a role in facilitating such exchanges between senior administrators of different government departments, policy-makers and experts in other fields such as economics.

A special plea was made for human ecology to be introduced immediately and widely into the curricula of medical students and public health administrators. It was most unfortunate that a subject so vital is not taught in most medical schools. If present trends continue, the environment will become the province of engineers and economists, and concern for human health will be overlooked in the environmental debate.

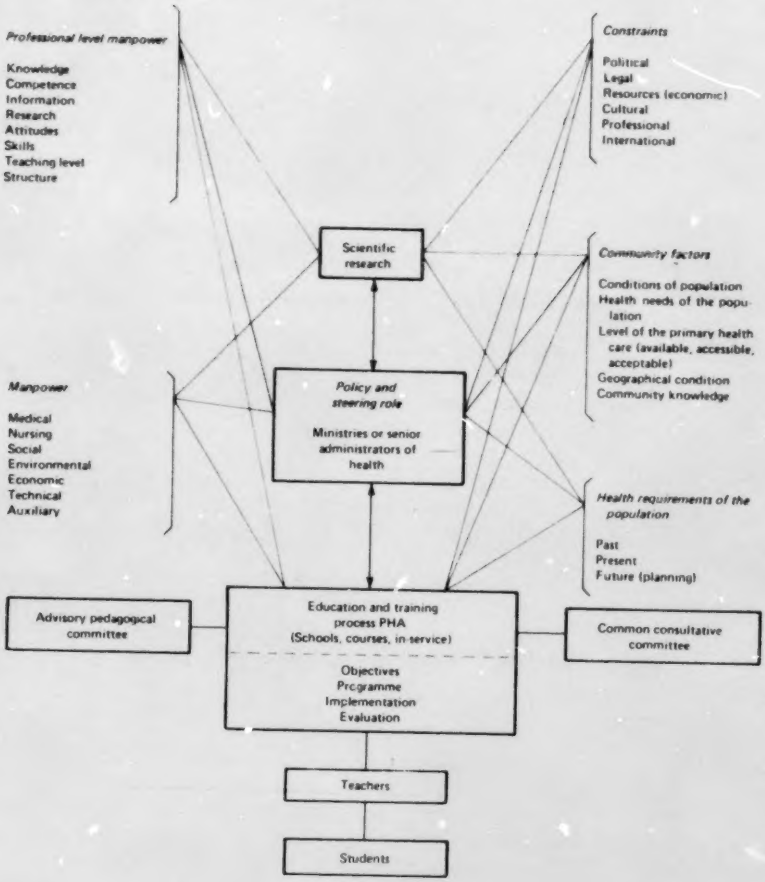
During this discussion Dr Sokolov of the Regional Office showed tables outlining methods of management relating to the level of the organization, at the level of individual care, community, subnational, national and international health services; the tables outlined the primary objectives, the characteristic functions and priority requirements at each of these levels.

A chart presented by Dr L.A. Judin of the Regional Office showed the interrelationship of factors determining the managerial policy of senior public health administrators (Fig. 1). These included the type and level of health service manpower, the community factors, the health requirements of the population, their interrelationship with research, education and training, and central to the whole the policy-making and steering role of ministries or senior administrators of public health.

The advantages of links between health service administrators and departments of community medicine for research, education and the formulation of health policy were commented on by one participant, while another stressed the difficulties of selecting top-level administrators and pointed out that medical schools could be good advisers on applicants for senior jobs and could also select those suitable for training in the first place.

The representative from headquarters advocated more problem-oriented training programmes designed to prepare the trainee for the performance of the tasks included in the job description of the senior public health administrator. He also felt that problem-solving exercises obliged the student to use his knowledge of several basic subjects and provided a stimulus for more detailed learning. The relevance of the subjects was more quickly appreciated

Fig. I. Factors determining the managerial policy of senior public health administrators



and the student remembered more when taught in this way. While generally agreeing to this, one participant pointed out that epidemiology is not yet taught in all medical schools; a short course in the basic planning subjects might be necessary before embarking on the problem-solving exercises.

5. EDUCATION AND TRAINING PATTERNS

5.1 Aims and objectives of training programmes and courses for top-level management personnel

Professor Kovrigina introduced this subject by reviewing the situation in the USSR, where there is considerable experience in training senior public health administrators. Courses are run in Kiev, Leningrad and Moscow. Public health administrators in these courses include heads of ministries of the Union and autonomous Republics as well as heads of public health departments of regions and national districts. Therefore the students have different tasks but one common feature – they all carry out management activity of a strategic nature.

The trainees have worked 8–10 years in the service before they are admitted to the course, which lasts 4 months, and most of them have already attended an advanced training or specialization course. They must be able to:

- realize the perspectives of the development of the system;
- set objectives for the organization;
- elicit problems and propose methods for their solution;
- control the implementation of the decisions; and
- find ways of increasing the efficiency of the system on the basis of control of the quality and effectiveness of the decisions.

The objectives of the courses must be in tune with the spirit of present-day administration and take possible future changes into consideration. The curriculum should be so designed that the students acquire the following skills:

- to elicit and formulate problems;
- to make effective decisions;
- to organize and put the system into action;
- to analyse information.

The aim of the training is to give the students a good understanding of all aspects of public health administration as a science. For the performance of their work, they will need a thorough knowledge of the public health system as a whole and of its relationships with other systems in society.

As the first objective, the trainee needs to gain a clear understanding of:

- the principles of the public health system;
- the legislation relevant to public health and the legal constraints;
- public health planning and financing;
- modern trends in public health policy.

The systematic approach to these problems provides opportunities for the creative use of systems analysis.

The second objective is to familiarize the students with the use of organizational analysis, based on national health information systems, and to teach them how to ensure the optimal functioning of the administrative system, thus increasing its efficiency.

The third objective is to provide knowledge of the different methods used in problem-solving, thus enabling the students to choose the best approach to administrative problems.

The fourth objective is to increase the trainees' skills in the use of present-day administrative techniques, including modern automatic control systems.

There are also special subject courses which last a month. The subjects studied include administration, economics, planning and international public health. These courses are suitable for the training of functional administrators, their curricula being revised at least every three years.

As an important part of the endeavours to perfect the USSR public health system, state inspection of these and other courses is carried out to ensure the highest standards of training and to keep the qualifications of the senior public health administrators to the level expected for the present-day state of science and society.

In the discussion that followed Dr Sokolov presented charts summarizing deficiencies and obstacles to the delivery of medical care, the planning network and, as shown in Fig. 2, a structural approach to health evaluation.

5.2 Flexibility of curricula in response to new types of health services for meeting health needs

Discussion on this subject was led by Mrs A.T. Heikinheimo-Lindholm. She observed that health needs and policies are changing and the new trends place the emphasis on primary care or basic health needs. Therefore there is a need for a flexible educational programme, the essential feature of which is a broad basic background which can later be supplemented or changed according to actual needs.

Fig. 2. Structural approach to health evaluation

Types of approach
Indices of interest
Individual
Family
Community
Provincial (district, regional)
National
International
Morbidity from infectious and the most important noninfectious diseases; cancer, cardiovascular, tuberculosis
Demographic indices: size of population, indices of natality, general mortality
Mortality from accidents and the most important epidemic and nonepidemic diseases
Tentative mean life expectancy
Maternal mortality, abortions
Size and causes of general incapacity for work
Indices and standards of human physical development
Occupational morbidity, temporary incapacity for work owing to disease
Mortality in early childhood, stillbirth
Hereditary and congenital diseases and defects
General and age-specific fertility
State of health in relation to economic and geographical factors, environmental contamination
Relation of health to material welfare and cultural level
Relation of health to specific working and living conditions
Relation of health to way of life (in the family)

Education for administration should cover a group of core subjects, lead on to a basic examination, and then be reinforced by practice and continuous education. After this, advanced courses should be given in the promotion of health care, rehabilitation, community medicine and national and international health and administration. The most important goal would be to give students an understanding of the objectives of the health policies and of his or her own role in the health care system.

To motivate the students for participation in the health work, the study programme should be planned and implemented in consultation with them so as to enable them to help to define and formulate the objectives, in the light of the means available.

For public health administration to be effective, the administrator must be skilled in many different disciplines, including such subjects as sociology, psychology, law and economics. Therefore, a comprehensive multidisciplinary programme of study is needed, in which theory must be integrated with practice. Teamwork is imperative and should be stressed throughout the training period.

The ensuing discussion centred on the inclusion of the students in the preparation of the objectives. The participants agreed that student involvement was essential and that the definition of objectives by students could be most valuable. It was pointed out that the students in question were postgraduates who could be asked to define objectives before the course was given. Long-term follow-up of the relevance of course objectives would also be useful, so as to ascertain how the course had helped students in their future career and the use that had been made of the contents of the course in their subsequent work.

5.3 International training of public health medical officers, including in-service training possibilities, and problems of international collaboration in training of this category

Professor E.K. Kroeger outlined the contents of the preliminary report on the study on training patterns for public health medical officers,[a] which the WHO Regional Office had commissioned him to make on the recommendation of the working group held in February 1976. Covering six western European countries, it included a short description of training schemes in Belgium, France, Federal Republic of Germany, Netherlands, Sweden and the United Kingdom. A brief account of the situation in Czechoslovakia and Poland was given verbally at the meeting. Diagrammatic representations of these courses were circulated so that the basic design and duration of each

[a] **Kroeger, E.K.** *Study on training patterns for public health medical officers: preliminary summary.* Copenhagen, WHO Regional Office for Europe, 1978 (unpublished document ICP/HMP 008/6).

could be readily compared. The aim of the study was to describe not only the existing training systems and prevailing training patterns, but also possible areas of change in western and eastern European countries. (The study on the six eastern European countries was finalized only after the meeting, and the consolidated report is given in Annex I). The study shows that at the moment each country has its individual pattern and that not all countries are satisfied with their own training system. The question arises as to what extent common training patterns are feasible and to what extent is specialization necessary to give the medical officer the right balance between general and specialized knowledge. The length of courses in the six western European countries studied varies between six months and two years. Only two of these countries offer further specialization after postgraduate academic training. The preparation of a dissertation or thesis forms part of the postgraduate academic training in all the countries except Sweden. Special examinations are taken in all the countries at the end of the postgraduate academic training except in the Netherlands and Sweden. All countries except Sweden award a diploma in public health or a special certificate equivalent to a diploma. In the Federal Republic of Germany, the Netherlands and the United Kingdom, the certificate entitles the holder to register officially as a public health specialist.

Postgraduate in-service training is poorly developed in most western European countries. There is no systematic training programme nor are there official guidelines for the training itself.

Although some further education of medical officers of health takes place in most western European countries, none of them has a systematic approach or a well-defined concept of what this should include.

This report generated considerable discussion which, however, added little to its well-thought-out conclusions.

6. NEW TRENDS

6.1 Responsibility of public health administrators for future strategy and tactics in health administrations including the monitoring and evaluation of their work and the feedback of results into the planning and production process

Dr A.J.M. Coelho introduced this subject by outlining the plans for the training of senior public health administrators in Portugal. Among the general ideas he presented for discussion he made the point that one of the main problems of any health service was that of integration. In this the senior public health administrator had to play a leading part, to bring the component parts of the system together and establish a dialogue. In Portugal it was

planned to establish a National Health Council, which would include the Ministries of Health, Education and Labour, to develop health and environmental policies.

In the training of senior public health administrators academicians would define the objectives and act as teachers, but public health administrators themselves would also act as part-time teachers, as they were in the best position to identify knowledge, attitudes and skills needed to carry out their own functions. The public health administrator also had a responsibility in promoting research. It was emphasized that continuous evaluation of the training programme would be essential.

The Portuguese health services were reorganized in 1971, with the purpose of providing a comprehensive health care system based on the principles of central planning, operational decentralization and regionalization of health care. Particular emphasis was laid on the development of an extended primary health care system, the major feature of which was the provision of a network of health centres where promotion of health, prevention of disease and basic health care would be provided free. The health medical officers became the directors of these health centres. At district level, senior public health officers were also made responsible for the coordination of all available health resources.

The one-year public health administration course now admits only physicians, though up to two years ago those with a university degree in veterinary medicine, pharmacy or biology were also admitted. Those admitted to the course must have two years' postgraduate experience, preference being given to those who have worked in public health. The training includes an introduction and group dynamics which together take up 5 per cent of the course. The main part covers basic teaching in environmental health, microbiology and control of communicable diseases, epidemiology, biostatistics, nutrition and general management techniques, and also public health administration, social and behavioural sciences and health economics. The students must also prepare a report on a special public health problem. There is a final examination and a diploma is awarded on completion of the course. Postgraduate refresher courses are organized. Plans are now under discussion for a three- to four-month course for specialization in the field of health services administration and management, which would concentrate on the organization of health services, health legislation, health planning, health information systems, the operation of health care delivery systems, health economics and evaluation in terms of cost/benefit, efficiency and efficacy, and consumer and health professional satisfaction.

Dr Rojo-Fernandez similarly reviewed the major points of policy in the training of public health administrators in Spain. He emphasized the need for the public health administrator to have the same training and status as other medical doctors. The content of the training programme must be matched with the needs of the country. The senior public health administrator must be able to analyse and interpret the health service data that are available.

A new curriculum is being planned for introduction in 1979 with the participation of the University Department of Preventive Medicine and Public Health, Madrid. More emphasis will be placed on the preventive aspects of medicine and a 2-year residency training programme established that will follow the 11 months' theoretical course. The public health administrator should not only plan the health services to meet the needs of the area, but should also have some idea of how satisfied the population is with these services and how much they use or abuse them.

Ideally such training should start at undergraduate level and continue at postgraduate level. Demonstration areas are particularly recommended for practical teaching at undergraduate level.

The discussion brought forth comments on the suggestion that public health administrators should be used as part-time teachers. It was felt that though their first-hand experience of the practice of public health is excellent, it is necessary to develop new concepts of health policy and for this a permanent scientific staff is needed. In reply to a question as to what medical subjects it was considered essential to teach to nonmedical public health administrators in Spain, it was stated that a basic course in general pathology and microbiology was found to be the most useful approach. The suggestion was advanced that the basic nonmedical disciplines which needed to be taught would be: economics, sociology, information systems, ecology and principles of management and administration, including operational research.

Though a great number of nonmedical topics might be included in the syllabus, it would be essential to concentrate on the subjects needed to tackle health service problems effectively. In this context, the attention of the Group was drawn to paragraphs 3.2, 3.4 and 3.5 of the report on the WHO Working Group on the Education and Training of Public Health Medical Officers (1977)[a] which cover the contents of training, senior staff training for leadership and educational policy and planning.

Research into new trends and the responsibility of public health administrators for future strategy and tactics in health administrations should take place in all European countries. This research must include monitoring and evaluation of their work and the feedback of results into the planning and production process, and is directly concerned with health measures, services and performance. For any evaluation to be meaningful it is necessary to ensure that something is done after it has been carried out. The difference between the evaluation of input and that of outcome must be appreciated; whereas the former is accepted, the latter is generally rejected. Criteria of evaluation need to be developed, and there is a need to evaluate choice as well as service.

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[a] *The education and training of public health medical officers: report on a Working Group*. Copenhagen, WHO Regional Office for Europe, 1977 (ICP/HMD 037).

The Working Group agreed that the improvement of evaluation should be based on all types of approaches to health, i.e., international, national, provincial (district, regional), community, family and individual (see Fig. 2). It was also emphasized that all those working in public health must share a common language, and to achieve this it is necessary that professionals from all the specialties must be trained together.

7. CONCLUSIONS

The Working Group reached the following conclusions.

(1) The roles and functions of medical officers of health vary so much that training would have to be based on specialization in different fields of public health besides preparing trainees for special posts. The result would be a combined system of training patterns.

(2) A combined system of this kind, which would harmonize with public health concepts, would be well suited to the administrative systems and organizational structures of public health services in most European countries. It would be based on the integration of academic and in-service training and on a systematic approach to further education.

(3) The system could be used as a framework by each country, within which it could develop its own training pattern to meet its own concept of public health. It would allow adaptation to the structure of its own public health services and prepare trainees for the duties and responsibilities of medical officers of health. It would permit account to be taken of the organization of its public health offices, the composition of its public health teams and the availability of other professions within the public health service. All this information would have to be collected before a training pattern for medical officers of health could be evolved in any particular country.

(4) Public health medical officers should be trained as resource persons to enable them to be considered for senior posts.

(5) Senior public health administrators could act as part-time teachers in schools of public health.

(6) In order to reduce losses from the ranks of medically qualified senior public health administrators, a good career structure should be designed, and salary scales comparable to those for senior members of other medical specialties should be assured.

(7) The senior public health administrator who acts as a coordinator in the planning, monitoring and evaluation of health services should either be medically qualified or have received training in another health field.

(8) WHO's policies and activities with regard to health services should be familiar to senior public health administrators starting their careers; such knowledge will assist them in the proper delivery of health services in their respective countries and will help them to achieve better mutual understanding and collaboration.

(9) Medical teachers and administrators at medical faculties should be alerted to look for suitable candidates among medical students and young medical personnel for careers as senior public health administrators.

8. RECOMMENDATIONS

(1) The WHO Regional Office for Europe should organize and carry out research activities relating to the training and management of public health administrators and make a comparative study in this field.

(2) The Regional Office should also carry out a survey of existing courses for public health administrators in the Member States of the European Region.

(3) The Regional Office should play a major role in the training of senior administrators in health services by means of exchange programmes, meetings and travelling seminars, thus providing opportunities for senior professionals to meet, define issues and compare experience, and by helping them to seek their own solutions to problems.

(4) The Regional Office should assist schools of public health to promote intercountry exchanges of senior administrators in different branches of government, and of policy-makers and experts in other fields, such as economics.

Annex I

STUDY ON TRAINING PATTERNS FOR THE PUBLIC HEALTH MEDICAL OFFICER

Introduction

Since the beginning of this century the concept of public health and the role and functions of medical officers of health have undergone many changes.

Several international seminars, workshops and meetings of experts organized by or in cooperation with WHO have discussed the impact of these changes on training in this field. The main difficulty in identifying priorities has always been the variation from country to country in the roles and functions of the officers.

In 1976 a WHO working group[a] recommended that a study of the existing patterns of training in the European Region be undertaken in order to determine priorities.

Aim of the study

The aim of the study was to describe not only the existing patterns of training, but also possible areas of change in different western and eastern European countries.

Six countries in western Europe (Belgium, France, the Federal Republic of Germany, the Netherlands, Sweden and the United Kingdom) and six in eastern Europe (Czechoslovakia, the German Democratic Republic, Poland, Romania, the USSR and Yugoslavia) were selected for the study. Two-day visits were paid to some of them to collect information on the training they provide.

Much of the information is presented in tabular form in this report, with the proviso that this may have led to oversimplification, with the result that certain differences between and even within countries are not immediately clear.

Western Europe

Role and functions

In most western European countries medical officers of health are employed by the state or a municipality. They are in charge of public health

[a] **WHO Regional Office for Europe.** *The education and training of public health medical officers: report on a Working Group.* Copenhagen, 1977 (ICP/HMD 037).

and advise the civil authorities in this field. Thus they exercise administrative functions rather than practising a medical specialty.

Their role and functions vary from country to country, depending on the public health concept, the administrative system and the structure of the public health services. They also vary within a given country, from place to place and from position to position, depending on the organization of the public health services. In particular, the situation is influenced by the degree of specialization of the services and the status of medical officers within the national administration.

Training

Because they exercise special functions, medical officers of health have always undergone postgraduate training. In some countries, such as Belgium, the Netherlands and the United Kingdom, the training takes place at university schools of public health or departments of community medicine in medical schools. In others, such as France, the Federal Republic of Germany and Sweden, state schools of public health have been set up for this purpose (Table 1).

The postgraduate training given at university schools of public health is regarded as a form of medical specialization, whereas that given at the state schools is seen more as a form of preparation for a special function.

These differences are also reflected in the different character of the schools. In the state schools, research plays a minor role, if it is carried out at all. They have been developed by administrations and are first and foremost teaching centres similar to other civil service training institutions.

In Belgium and the Netherlands, on the other hand, the university schools have been developed with a view to research and improvement of knowledge and methods in public health. As in other medical disciplines this has resulted in ever greater specialization within the field of public health.

This in turn has led to more and more training difficulties. On the one hand the medical officer has to be a generalist in public health, and on the other he needs knowledge of the different public health specialties. The scope of public health has expanded from environmental health and communicable disease control, together with individual health care for special groups in the community, at the beginning of this century to include administration and management of services today; it therefore no longer seems feasible to provide comprehensive training embracing all aspects of the discipline. This has resulted in uncertainty as regards the most suitable form of training. Each country now has its own pattern which it nevertheless regards as unsatisfactory in some respects.

The question arises as to the extent to which common training patterns are feasible and to which specialization is necessary to give the officers the right balance between general and specialized knowledge.

Table I. Training centres for medical officers of health in western Europe

	Belgium	France	Germany, Fed. Rep. of	Netherlands	Sweden	United Kingdom
Number	6	1	2	6	1	7-8
Type	University schools of public health	State school of public health	State schools of public health	University and research institutes	State school of public health	University schools of public health and departments of community medicine in medical schools (often acting together in consortia)
Undergraduate training	+	–	–	+[a]	–	+
Comprehensive training	+	+	+	+	+	+
Specialization courses	+[a]	+	–	+[a]	–	+[a]
Continuing education courses	+[a]	+[a]	+	+[a]	–	+
Research activities	+	+	–	+	–	+

[a] Variations in programme or special arrangements.

Special requirements

In most western European countries more or less detailed regulations, and sometimes even special laws or bylaws, govern the training of medical officers of health. Table 2 shows the requirements in six selected countries.

Table 2. Training requirements for medical officers of health in western Europe

	Belgium	France	Germany Fed. Rep. of	Netherlands	Sweden	United Kingdom
Graduation as physician	+	+	+	+	+	+
Postgraduate medical experience	+[a]	+[a]	+	+[a]	+[a]	+
Postgraduate academic training in public health	+	+	+	+	+	+
Postgraduate in-service training in public health	–	+	+	+	–	+
Special examination	+	+	+	–	–	+

[a] Variations in programmes or special arrangements

In all countries graduation as a physician is required for the post. However, the situation differs between countries as regards the extent of postgraduate clinical experience necessary, depending on the organization of public health services and on the position of the officers within them.

Some countries, such as the Federal Republic of Germany, have an integrated public health system encompassing environmental health, communicable disease control and individual health care for special groups of the population. Because of the individual health care component in their work, the officers need substantial clinical experience. In other countries, such as

Belgium, France and the Netherlands, with separate services for public health control (environmental health and communicable diseases) on the one hand and for individual health care for special groups on the other, clinical experience is less important for officers working in the control branch, although even specialist qualifications are often required for those providing individual care.

In the United Kingdom (since the reorganization of the National Health Service in 1974), the community medicine concept has been developed in terms of the health care needs of communities and the organization and management of health services, so that epidemiological and administrative skills are required rather than a high degree of clinical experience.

Obviously, then, the requirements for clinical experience vary considerably from country to country. Even within a country the requirements vary according to the duties and responsibilities of the position in question. In general, however, it can be said that although clinical experience is not required for all posts, it is still an advantage for an officer to have some experience and in practice it is at least expected, if not required, in most western European countries.

Postgraduate academic training

Such training is required for medical officers of health in all countries. As can be seen from Table 3 the content of the training varies considerably from country to country and even from school to school.

The length of the courses normally ranges from six months to two years, depending on the nature of the training. In France a special, eight-week course is open to registrars or teaching assistants in hospitals or universities, i.e., physicians with at least two years' experience. In Belgium there are weekly part-time lecture programmes, whereas in France, the Federal Republic of Germany and the United Kingdom full-time courses are offered. The Scandinavian School of Public Health in Gothenburg runs three full-time courses of two months each. In the Netherlands a full-time course of three months can be taken, or a lecture programme of one day a week for nine months; this basic training is followed by a six months' lecture programme of two days a week for six months in general public health or in a public health specialty. In occupational health there is a modular course lasting two years.

Besides these variations in content and length, there are differences in the structure of the training. Institutions in the Federal Republic of Germany, the Netherlands, Sweden and the United Kingdom offer only set courses with compulsory subjects, whereas those in Belgium and France have a basic compulsory course and several optional courses.

In the United Kingdom a modular course lasting two years can be taken as an alternative to the full-time course.

Only two of the selected western European countries offer further specialization after the basic postgraduate academic training. In France there

Table 3. Postgraduate academic training for medical officers of health in western Europe

	Belgium	France	Germany, Fed. Rep. of	Netherlands	Sweden	United Kingdom
Duration	1–2 years part-time	1 year full-time	6 months full-time	3 months full-time or 9 months part-time	3 X 2 months full-time	1 year full-time or 2–3 years part-time
Structure	Weekly lectures with compulsory and optional subjects	Academic courses with compulsory and optional subjects	Comprehensive course in four parts	Comprehensive course or weekly lecture programmes	Courses in different public health specialties	Comprehensive course or modular course
Research activities	Thesis	Thesis	Thesis	Thesis	–	Thesis
Final examination	+	+	+	–	–	+
Academic degree or other qualification	Public health physician	State diploma in public health	State certificate	Diploma	–	DPH or MSc and MFCM

are special courses in nutrition, statistics, health planning and health education, each involving three to four months' full-time study. In the Netherlands special studies are offered on a part-time basis in general public health and public health administration, occupational health (modular course lasting two years), child health and social security medicine. These special studies, however, are still regarded as part of the basic postgraduate academic training.

To illustrate the variations in the training Table 4 gives the basic curriculum of one school of public health in each country. In all institutions the training lasts at least 400 hours. The courses at the Academy of Public Health in Düsseldorf and the Scandinavian School of Public Health in Gothenburg last 700 hours, whereas at the Free University of Brussels and the School of Public Health in Rennes optional courses of about 100–200 hours are also offered, raising the total duration of the training to 600 hours. The Netherlands Institute for Preventive Medicine in Leiden offers an additional 250 hours of specialist training, bringing the total to 650 hours. On the other hand the London School of Hygiene and Tropical Medicine, where strong emphasis is placed on research work and the preparation of a dissertation, allows additional time for this purpose.

The preparation of a dissertation or thesis, usually dealing with specific public health problems, is part of the postgraduate academic training in all countries except Sweden. The quality of the dissertations varies according to the requirements of the individual school and the emphasis placed on the work by the student. In some cases, dissertations are merely reports or analyses of problems rather than scientific studies. Others, however, attain a relatively high scientific standard.

In France a dissertation must be prepared and submitted to a panel composed of university teachers and senior staff of the Ministry of Health and Social Security, in equal proportions. All students, except those who entered the training after working as a registrar or teaching assistant, are required to obtain a certificate of special studies in preventive medicine, public health and hygiene.

Except in the Netherlands and Sweden, examinations are taken at the end of the postgraduate academic training.

All countries except Sweden award a diploma in public health or a certificate equivalent to a diploma. In some countries, such as the Federal Republic of Germany and the Netherlands, the certificate entitles the holder to register officially as a public health specialist. In the United Kingdom the General Medical Council will register the diploma and may issue certificates of specialist training for EEC purposes.

Postgraduate in-service training

As can be seen from Table 5, prescribed postgraduate in-service training of medical officers of health is poorly developed in most western European countries.

Table 4. Training programme for medical officers of health at selected institutions in western Europe

	Belgium	France	Germany, Fed. Rep. of	Netherlands	Sweden	United Kingdom
Institution	School of Public Health, Free University of Brussels	School of Public Health, Rennes	Academy of Public Health, Düsseldorf	Netherlands Institute for Preventive Medicine, Leiden	Scandinavian School of Public Health, Gothenburg	London School of Hygiene and Tropical Medicine
Basic Curriculum	1. Epidemiology 2. Environmental health 3. Statistics 4. Hygiene and microbiology 5. Social medicine 6. Organization of public health services 7. Health legislation 8. Mental health 9. Health education 10. Radiation protection 11. Communicable disease control 12. Food hygiene	1. Public Health statistics 2. Epidemiology 3. Public health administration 4. Environmental health 5. Health education 6. Medicosocial practice	1. Organization of public health services 2. Health legislation 3. Public health administration 4. Epidemiology 5. Statistics 6. Demography 7. Medical expertise 8. Social hygiene 9. School and youth health 10. Health education 11. Forensic psychiatry 12. Environmental health 13. Communicable disease control 14. Sports medicine	1. Organization of public health services 2. Epidemiology and biostatistics 3. Behavioural sciences 4. Environmental hygiene	*Course I* 1. Biostatistics 2. Epidemiology 3. Water and food hygiene *Course II* Environmental health *Course III* Social medicine	1. Epidemiology 2. Statistics 3. Behavioural sciences 4. Organization of health care 5. Environmental health and communicable disease control 6. Health and prevention 7. Miscellaneous topics in community medicine
Hours	about 400	about 420	about 700	about 400	about 700 (each 240)	about 400

Optional programmes	1. General public health 2. Social hygiene 3. Occupational health 4. School health and physical education 5. Radiation protection	1. Statistics 2. Informatics 3. Physics and chemistry 4. Epidemiology of malnutrition 5. Health care in developing countries 6. Medicosocial services for mothers and children 7. Family planning	–	See below	–	Special studies for dissertation
Hours	each field 140–190	each field 45–65	–	–	–	No specified time
Total hours	550–600	about 500	about 700	about 650 including specialization	about 700	(400) + individual studies
Specialization after basic training	–	1. Nutrition 2. Statistics 3. Health planning 4. Health education	–	1. Public health administration 2. Occupational health 3. Child health 4. Social security medicine	–	In-service training in connexion with research work
Duration	–	3–4 months each full-time	–	6 months each full-time	–	1 year full-time or basic training; 1 year of special studies for dissertation

Table 5. Prescribed in-service training for medical officers of health in western Europe

	Belgium	France	Germany, Fed. Rep. of	Netherlands	Sweden	United Kingdom
Duration	–	3 months	8 months (2–4 years planned)	2 years	–	2–3 years
Systematic training programme (guidelines)	–	–	–	–	–	+
Special in-service training centres	–	–	–	–	–	–
Linkage with academic institutions (schools of public health)	–	+[a]	–	–	–	+[a]

[a] Variation in programmes or special arrangements.

Belgium and Sweden do not require in-service training. The Federal Republic of Germany, the Netherlands and the United Kingdom, where public health has become a recognized medical specialty, require in-service training of at least two years during specialization. In the Federal Republic of Germany and the Netherlands, training takes place in a public health office; there are, however, no systematic programmes or official guidelines for the purpose, and it is left entirely to the heads of the public health offices to decide on the type of training. In the United Kingdom higher training in this specialty has to be undertaken in accordance with a programme, and in a post, approved by the Joint Committee for Higher Medical Training.

There is generally no linkage with academic institutions. In France a period of three months' in-service training has at least some linkage with the school of public health. The influence of the school on the training is, however, limited. Responsibility is again left to the head of the local public health office and official guidelines have not yet been introduced.

None of the academic institutions has its own in-service training facilities except for the School of Public Health in Brussels, which runs an area school and youth health clinic for the municipality. At the other schools of public

health contact with the health services is maintained only through health staff who teach at the schools or through research projects undertaken in conjunction with public health offices.

In general, it can be said that in-service training does not yet form an integral part of the education of medical officers of health in western Europe, except in the United Kingdom. In other countries, where in-service training is required as a part of specialization in public health, it is not linked with the academic instruction.

Continuing education

In most western European countries, academic institutions and public health associations arrange regular or special seminars and congresses for the further education of medical officers of health. They vary in number and kind from country to country, depending on the functions of the institutions and associations.

The London School of Hygiene and Tropical Medicine and the University of Manchester, for instance, have a special extension centre for further education. Other institutions such as the Academy of Public Health in Düsseldorf run refresher courses besides their regular postgraduate training.

The further education offered is generally not based on any systematic study of needs in the field. In most cases, the institutions and associations pick subjects they think may be of interest to most officers. The technical discussions which usually take place at official meetings of officers make an important contribution. Such meetings, especially for senior officers, are held more or less regularly in most countries. This permanent exchange of views is of great value to most of the participants as they often have to deal with problems on their own. From this standpoint, the importance of these exchanges cannot be overemphasized.

To sum up, although most western European countries provide some further education for medical officers of health, in none is there a systematic approach to the education or a well-defined concept of what it should include.

Eastern Europe

Role and functions

In eastern Europe (as is the case for the United Kingdom since 1974) medical officers of health of the traditional western European type do not exist. Such officers have been in charge of preventive health services, especially environmental health services, as well as certain social health services more recently. The responsibilities have not extended to the private sector, especially in respect of primary health care, or to a large extent to hospital services. In other words the officers have dealt only with a part of the health care system – that part which is considered as public health in western Europe.

The eastern European countries, on the other hand, regard all services as public health services. Thus the medical officers of health are responsible for all health services provided to a given population group in these countries (except in Yugoslavia where sanitary inspectors are responsible for environmental control). At the same time, they are the representatives of the health sector within policy-making bodies. Hence they function more as medically qualified people's representatives than as physicians in charge of public health, as compared with their counterparts in western Europe.

Training

In eastern Europe all physicians, after qualification, have to undergo postgraduate training in order to specialize. The recognized fields of specialization vary from country to country. Besides the disciplines of clinical medicine, the traditional public health specialties are practised in most of the countries, e.g., hygiene, epidemiology, social medicine and social hygiene. The training is usually provided by a central institute of postgraduate medical education. In Yugoslavia specialization is carried out according to the needs of the republics, as specified by the appropriate health institutions which also finance the training.

During specialization emphasis is put on practical and in-service training, supplemented by two or three academic courses, each normally of two or three weeks' duration. Examples of training in traditional public health specialties are given in Table 6.

Special requirements

There are no special training requirements in eastern Europe similar to those in western Europe for qualification as a medical officer of health. The position is open to any specialist who has proved to be not only a good specialist but also a good organizer and manager. However, those considered qualified are usually sent for training at a central institute of postgraduate medical education, before or after they are appointed.

Postgraduate academic training

The central institutes of postgraduate medical education in the six selected eastern European countries have the same general structure. They offer similar formal training, usually in short courses lasting several days or weeks, but seldom several months. Table 7 shows the training centres for medical officers of health in the selected countries.

There are courses for nearly all disciplines, in both clinical and non-clinical fields, including hygiene, epidemiology, social medicine and social hygiene, and other traditional public health specialties. The courses are held

Table 6. Training in public health specialties (hygiene, epidemiology, social medicine, etc.) in eastern Europe

	Czechoslovakia	German Democratic Republic	Poland	Romania	USSR	Yugoslavia
Duration	6 years	4–5 years	5 years	6 years	5 years	3 years
Internship	1 year	–	1 year	3 years	1 year	1 year
In-service training for first level specialists	2 years	4–5 years	1 year	3 years	1 year	1 year (academic post-graduate training)
Additional in-service training for second level specialists	3 years	–	3 years	1 year	3 years	2–3 years
Additional academic training (courses)	+ several weeks	+ several weeks	+ several weeks	+ several weeks	+ several weeks or several months	+ 1–2 weeks (seminars)
Thesis	–	–	+	–	–	+
Final examination	+	+	+	+	+	+

Table 7. Training centres for medical officers of health in eastern Europe

	Czechoslovakia	German Democratic Republic	Poland	Romania	USSR	Yugoslavia
Number	2	1	1	6	13	2
Type	Institutes for postgraduate medical education	Academy of postgraduate medical training	Medical centre of postgraduate education	Institutes of hygiene and public health, faculties of medicine and pharmacy	Institutes of advanced medical training	Medical Faculty, University of Belgrade; School of Public Health, University of Zagreb
Undergraduate training	–	–	–	+[a]	–	+[a]
Comprehensive training	–	–	–	–	+[a]	+[a]
Specialization courses	+	+	+	+	+	+
Continuing education courses	+	+	+	+	+	+[a]
Research activities	+	+	+	+	+	+

[a] Variations in programmes or special arrangements.

at more or less regular intervals. They have to be completed by all those who wish to specialize in the field concerned or another field for which such training is also required. Special courses are arranged for those who already hold or are being prepared for positions of leadership, such as medical officers of health. The courses usually last only a few weeks, although in the USSR some last up to four months.

Postgraduate in-service training

Such training is provided in nearly all health centres in the countries. It is supervised by qualified specialists, who themselves attend regular continuing education courses in order to acquaint themselves with the latest scientific developments.

The training usually starts immediately after internship. It usually takes one to two years and leads up to an examination to qualify as a first level specialist. For the second level specialist, three or more years of advanced training are then required. This may be followed immediately by further training.

There are, however, certain differences between the countries in the general line of specialist training, which are beyond the scope of this paper.

Continuing education

In all eastern European countries there is a system of continuing education in all disciplines, organized by the ministries of health through the central institutes of postgraduate medical education and/or local bodies.

The institutes call in the specialists at regular intervals – usually every two or five years – for short courses, or send them for special training. After their return home, the specialists are expected to pass on their knowledge to other staff through local seminars.

In Yugoslavia, continuing education is provided through seminars, courses and professional meetings at the level of the regions or republics.

Conclusions

An outline has been given of the variations not only between the role and functions of medical officers of health in different western and eastern European countries, but also between the respective training systems.

The main variation relates to the duties and responsibilities of the officers.

The situation is more uniform in eastern Europe, where there is one basic concept of public health and where the duties and responsibilities of the officers are similar in all countries.

To develop common training patterns, the range of duties and responsibilities common to public health staff in eastern and western Europe would first have to be defined.

Even the new programme for training of community physicians in the United Kingdom, who probably represent a type of public health official carrying out functions between those common in eastern and western European countries, cannot be used as a model, although it combines the traditional academic instruction of western Europe with the in-service orientation of higher specialist training in eastern Europe.

In general there seems to be a tendency in western Europe to provide different types of modular courses during a period of in-service training rather than traditional full-time academic courses.

Systematic continuous education still poses problems in most western European countries. It is provided on a voluntary basis, by different institutions and associations. In eastern Europe it is centrally organized and more or less compulsory for specialists.

For as long as there are different philosophies about health care and correspondingly different health systems, each country will have to develop its own pattern of training for medical officers of health according to its concept of public health. The patterns will thus be influenced by the organization of the public health offices in each country, by the composition of the public health teams and by the availability of specialists in public health and related fields.

Recommendations

The study provides an outline of the structure and forms of training of medical officers of health in 12 selected western and eastern European countries. Owing to the short time available, an in-depth analysis could not be made. Even within a given country, the situation is generally so complex that a thorough analysis by a foreigner, who does not have detailed knowledge of the educational system and structure of the health services, would take weeks to complete.

Therefore, the study represents only a first step towards a further exchange of views and experiences with regard to the training. Such a dialogue would be particularly fruitful if it could take place directly between the different institutions concerned, with the Association of Schools of Public Health of the European Region (ASPHER) playing an important catalysing role.

Strong support of ASPHER by WHO would probably be a good investment in this respect. However, WHO should also establish links with a few leading schools of public health in eastern and western Europe (probably five to seven schools designated as WHO collaborating centres), where research could be carried out on methods of training in this field. All the other schools of public health would benefit from the results of this research. The greatest benefit, however, would accrue to the medical officers of health of all the countries.

Annex II

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